



# TWISTED PAIR AND COAXIAL LINE PROTECTOR

Offers cost-effective protection for both twisted pair signal line and coaxial LAN/video line in a single protector

- ◆ Twisted pair and coaxial line protection in one single protector
- ◆ Multi-stage protection offers exceptional safety
- ◆ Full range of voltage
- ◆ Engineered for easy installation
- ◆ High surge rating and bandwidth
- ◆ Protects high current signal lines or even low power DC/AC lines
- ◆ Five years warranty



## Twisted pair and coaxial line protection in one single protector -

The TCP series of protectors offer a flexible surge protection for one pair, two pairs or four pairs of any twisted pair signal together with coaxial line of LAN/Video signal protection. It is the most cost effective and space saving solution for the most demanding protection requirements.

## Multi-stage protection offers exceptional safety

-TCP series employed sophisticated hybrid circuitry by using a combination of high energy gas discharge tube, ultra fast diodes and SAD which ensures excellent protections without impeding normal operation.

**Full range of voltage** -Any kind of control, communication or automation lines, TCP series of protectors has the suitable voltage models to fulfill users' expectations. They can be used in fire and security systems, PLC, railway signalling, computer communications like RS232, RS422, RS485 protocols, SCADA and any other signal voltage operating at 5V to 200V.

## Engineered for easy installation -

The wiring are done by a plugable terminal strip for easy installation and service. The protectors can be easily secured onto a standard Top Hat DIN rail.

**High surge rating and bandwidth** -With its 20KA surge handling capability and 20MHz high bandwidth, it can provide the safest protection in lightning intense environment and also ensures a smooth data traffic.

**Protects high current signal lines or even low power DC/AC lines** -If higher current control lines or DC/AC low power lines need to be protected, the "/H" version, two amperes protector is the ideal choice. It can supply up to 2A to meet the high current signal or power line protection requirements.

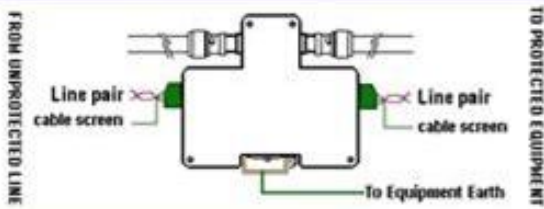
**Five years warranty** -All LEPS protectors are tested to comply with many international safety standards and with five years warranty.



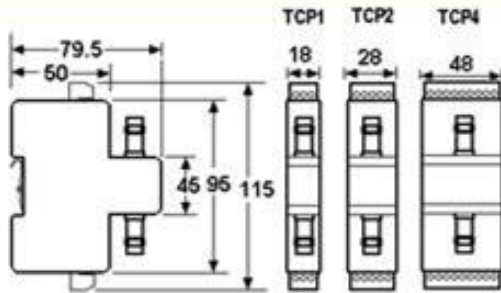


# SPECIFICATIONS AND DRAWINGS

## Installation



## Dimensions



## Ordering Information

MODEL	MAX. WORKING VOLTAGE	LET-THROUGH VOLTAGE	DESCRIPTION
TCP1-V5	7V	10V	Single pair, data/signal line
TCP1-V12	17V	23V	p rotector, plus coaxial line
TCP1-V24	34V	43V	BNC(F/M) protection
TCP1-V48	68V	79V	
TCP1-V130	180V	210V	
TCP1-V200	280V	320V	
TCP2-V5	7V	10V	Two pairs, data/signal line
TCP2-V12	17V	23V	p rotector, plus coaxial line
TCP2-V24	34V	43V	BNC(F/M) protection
TCP2-V48	68V	79V	
TCP2-V130	180V	210V	
TCP2-V200	280V	320V	
TCP4-V5	7V	10V	Four pairs, data/signal line
TCP4-V12	17V	23V	P rotector, plus coaxial line
TCP4-V24	34V	43V	BNC(F/M) protection
TCP4-V48	68V	79V	
TCP4-V130	180V	210V	
TCP4-V200	280V	320V	

### Notes:

- (1) The suffix of the model number represents the nominal working voltage e.g. V5 has 5V nominal working voltage. If male to male(M/M) or female to female(F/F) is required, add "/M" or "/F" respectively at the end of the model number.
- (2) Other coaxial line connector type is available on request.
- (3) If higher current(>300mA) control lines or low power DC/AC lines need to be protected, add "/H" at the suffix of the model number which can supply up to 2A current, e.g. TCP2-V24/H.
- (4) For different applications or communication protocol's protection, please refer to our product selection guides.

## General Specifications

Max. working voltage:	7 - 280V(see ordering information), 8V for coaxial line
Max. operating current:	300mA(2A, /H version)
Protection modes:	common and transverse
Protection stages:	3 stages
Earth leakage current:	<5μA
Response time:	<5ns
Max. surge rating:	20KA(8/20μs)
Max. data rate:	20Mb/s
Insertion loss:	<1dB at 20MHz
Voltage standing wave ratio:	<1.2
Let through voltage: (At 5KV 10/700μs)	10 - 320V(see ordering information) 14V for coaxial line
Capacitance:	50pf
In line resistance:	3.9Ω(twisted pair)
Cable impedance:	50Ω for coaxial line, (75Ω available)
Standards compliance:	BS6651-1999 Cat.A.B.C AS1768-2003 Cat.A.B.C IEC 61643- 21 ITU(CCI/T)1X K17 CP33- 1996 Cat.A.B.C UL497B
EMC compliance:	BS EN 60950: 1992 BS EN 61000-6-2:1999
Connector type:	pluggable terminal strip(twisted pair)
Earth connection:	DIN clip
Enclosure material:	Anodized aluminum
Conductor size:	2.5mm <sup>2</sup> (twisted pair)
Operating temperature:	-40-85°C
Humidity:	0-95% (R.H.)
Altitude:	0-3650m
Weight:	TCP1-All models 205g TCP2-All models 250g TCP4-All models 340g

